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Progress in the implementation of the Programme of Action for the Sustainable Development of Small Island Developing States

Report of the Secretary-General

Addendum

Management of coastal and marine resources in small island developing States*

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I. Introduction

1. The coastal area of small island developing States plays a very important part in their socio-economic development. Most activities take place in coastal areas, either because the island is too small, making it a coastal entity, or because the high areas of larger islands are steep thereby necessitating that the population settle on the gently sloping coastal areas.

2. Two important industries in most small island developing States are tourism and fisheries, which rely heavily on coastal and marine resources. Tourism is relied upon by most small island developing States to make an important contribution to their gross domestic product (GDP), employment and foreign exchange earnings. It is a fast-growing industry which is overtaking traditional industries (for example, sugar) as a source of revenue. However, the tourist industry is susceptible to the deterioration of the fragile environment on which it depends. In contrast to their land area, the marine area under the jurisdiction of small island developing States is generally very large. The ocean is regarded as a source of wealth and nutrition. At the present, most small island developing States are particularly interested in exploiting their fisheries resources, which contribute to incomes and their protein needs. While these States generally face similar constraints in the development of their coastal and marine resources as do mainland areas, they have additional constraints, the most important being their small land area and limited natural and human resources, which limit their options for development.

II. Problems of marine and coastal areas

3. The problems of management of coastal and marine resources are similar for most small island developing States — they differ primarily only in terms of magnitude. A few small island developing States, usually the larger ones, face greater problems on account of their larger number of development activities which include agriculture, industry and mining. The problems which are common to all islands are:

(a) **Beach erosion**. The biggest cause of beach erosion is the mining of sand and coral, which are limited in supply but for which demand is very high for construction purposes; some small island developing States have instituted regulations for controlling this activity, which have not always been enforced; the poorly regulated removal of sand and vegetation in shore areas can result in erosion and an elevated risk of storm damage; artificial barriers used to control beach erosion are costly to build and poorly constructed barriers are ineffective;

(b) **Loss of shoreline**. Shoreline and marine habitats serve to protect the shoreline from erosion and flooding. Most beach hotels and water-based tourism infrastructure in small island developing States are structures built on the beach or in the water; the infrastructure includes piers, marinas, jetties and artificial beaches, which can lead to loss of shoreline; since all near-shore and shore areas exist in dynamic balance, a change in one parameter can affect the characteristics of the site and subsequently its viability;

(c) **Habitat degradation**. Habitats, such as coral reefs and mangroves, are increasingly being degraded through unsustainable development patterns; poor land use causes siltation; the physical removal of coral reef and the discharge of industrial, agricultural, and sewage effluents contribute to the degradation of habitats;

(d) **Pollution of marine and coastal resources**. Pollution of marine and coastal areas from land-based sources of pollution is a major issue for small island developing States; the pollution is largely from domestic sewage, industrial effluents and agricultural run-off; in a few larger islands (for example, Jamaica and some Melanesian countries), pollution from mining effluent is also a cause for concern;

(e) **Sustainable use of the exclusive economic zone (EEZ)**. The United Nations Law of the Sea has greatly increased the EEZ of small island developing States. In some cases EEZ can be hundreds of times the land area of a small island, making it an important potential resource; however, these States often do not have the human resources and technological capacity to exploit this resource fully and in a sustainable manner;

(f) **Extension of EEZ boundaries**. According to the United Nations Convention on the Law of the Sea, the existing EEZ boundaries may be further extended on the basis of a component of natural progression; this is important for small island developing States with limited land resources and which look to the EEZ as an additional resource; these States often do not have the capability, however, to define the seabed boundaries in areas where such an extension of boundary might be possible;

(g) **Management of fisheries**. Though most small island developing States have fisheries policies and some type of institutional framework for the management of fisheries resources, they often cannot manage this resource

in a sustainable manner; this is because they do not have information on the size of fish stocks and the movements of fish within EEZ; furthermore, they do not have the capacity to monitor EEZ and thereby cannot address the problem of illegal fishing by foreign companies effectively.

III. Progress achieved in the sustainable management of coastal and marine resources

4. It is now about five years since the adoption of the Programme of Action for the Sustainable Development of Small Island Developing States.[1] During this period, small island developing States in all regions have made some progress towards sustainability of coastal and marine resources. Particularly significant in this regard is the adoption of regional action plans reflecting the priorities of small island developing States, their capabilities and the resource needs. Action plans providing a framework for implementing the Programme of Action in the coastal and marine area have been given a very high priority in all regions.

5. Awareness of integrated coastal area management has also increased. More countries have been adopting the concept of integrated coastal area management (ICAM). Guidelines have been developed and pilot projects have been carried out in all small island developing States regions, in most cases, with donor assistance. The National Environment Management Strategies provide a framework for implementing ICAM. For instance, Cape Verde, Fiji and Kiribati and other small island developing States have developed plans and are at different levels of their implementation. Some countries have established specific institutions for coastal zone management. One example is the Barbados Coastal Conservation Unit which has produced a draft Coastal Zone Management Act. Resource surveys, mapping and hazard assessments are other activities that have been carried out within the framework of ICAM.

6. At the regional level, ongoing activities conducive to the sustainable management of coastal and marine resources include training of personnel, acquisition of equipment and facilities, production of stock assessment data and other resource inventories, upgrading of skills for management of marine parks, studies on pollution, information exchange and sharing of experience from within and outside the regions, and production of ICAM plans using regional guidelines. An example of the latter is the Guidelines for Integrated Planning and Management of Coastal and Marine areas in the Wider Caribbean Region, prepared by the Caribbean Environment Programme and the Island Resources Foundation.

7. In the area of fisheries management, all small island developing States have institutions responsible for fisheries. Most South Pacific countries have adopted policies on the sustainable exploitation of fisheries. Through regional cooperation, small island developing States can collectively negotiate fisheries agreements with foreign companies. To this end, the Forum Fisheries Agency of the South Pacific region provided technical support to small island developing States for negotiation of the South Pacific Tuna Treaty with the United States of America. Small island developing States in the Indian Ocean have initiated an integrated fisheries project, focusing on research, stock assessment, monitoring, control, surveillance, preservation of species and training. The Indian Ocean Commission is developing an oil spill contingency plan as part of its efforts to control marine pollution from sea-based activities.

8. All small island developing States regions have adopted an international coral reef initiative (ICRI) strategy. Most have networks to monitor the health of the reefs. The Indian Ocean Commission and the South Pacific Environment Programme (SPREP) have developed guidelines for monitoring coral reefs, and the current bleaching of coral reefs is being studied by a number of countries, including small island developing States.

9. Regional organizations have played an important role in information collection and exchange. Numerous publications on the various disciplines of coastal and marine management have become available. These, assisted by public information material such as posters, audio-visual material, brochures and leaflets, have contributed to awareness-raising. Many networks and nodes of information exchange have been established throughout the South Pacific region. These include the Pacific Environment and Natural Resource Information Centre, which was created to assist countries with the collection, assessment and reporting of environmental information relevant to small island developing States.

10. Small island developing States also have been the recipients of formal and informal training efforts to improve their capacity to implement sustainable coastal and marine resource management from regional and international institutions. Through regional organizations, many of these States have been able to mobilize financial resources. One example is the South Pacific project, which has secured US$ 20 million. Other agencies (for example, the Indian Ocean Commission and the Organization of the Eastern

Caribbean States) have also been instrumental in mobilizing financial and technical resources from organizations such as the United Nations Environment Programme, the United Nations Development Programme, the Food and Agriculture Organization of the United Nations, the European Union and the United States Agency for International Development.

Major initiative

Development and implementation of the Strategic Action Programme of the Pacific Small Island Developing States

The small island developing States of the South Pacific region have secured funding from the Global Environment Facility (GEF) to prepare a Strategic Action Programme (SAP). The long-term objective of the GEF project is to conserve and manage the coastal and ocean resources in the South Pacific region in a sustainable manner. The Strategic Action Programme was prepared, using national task forces coordinated by a Regional Task Force. The participating countries or areas are Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

The small island developing States of the South Pacific region have secured further funding of some US$ 20 million to implement SAP, with GEF contributing US$ 12 million of the total. The project's activities are designed to encourage comprehensive, cross-sectoral, ecosystem-based approaches to prevent and/or mitigate existing and imminent threats to international waters. The two interlinked components of SAP are integrated coastal and watershed management and ocean fisheries management.

IV. Constraints

11. In the implementation of the sustainable development of coastal and marine resources, implementing agencies and governments of small island developing States have been faced with a number of constraints. The common ones are:

(a) **Uncoordinated delivery mechanisms between the agencies**. The coordination between implementing agencies working in this priority area appears inadequate; uncoordinated approaches duplicate activities and overload the capacities of Governments which already suffer inadequate levels of human, financial and institutional resources;

(b) **Inadequate coordination at the national level**. Despite the fact that most small island developing States have adopted the ICAM concept in principle, coordination of activities between the implementing agencies, private sectors and the community has yet to materialize; inadequate coordination at the national level has reduced the effectiveness of efforts made; few small island developing States have a specialized agency focusing on coastal zone management; as a result, the trend has been to put more emphasis on coastal zone management through exploring options for strengthening existing agencies and collaborating mechanisms among relevant agencies, or to set up specialized units with prime responsibility for coordinating coastal zone management along with their other functions;

(c) **Inadequate capacity at the national level for implementation**. The number of people with formal training in environmental subjects is still very small in most small island developing States with the result that participation in decision-making by major groups is limited, as is the ability of these States to carry out fundamental environmental work;

(d) **ICAM not integrated into national development plans**. Most efforts on integrated coastal area management, though technically innovative and successful in various cases, have evolved at the local level, leaving them isolated from the mainstream of national development planning; furthermore, such efforts have not attracted substantial funding, making the initiatives less effective than they could be;

(e) **Inadequate financial resources from national budgets and the international community**. The financial resources available to small island developing States for implementing ICAM have been inadequate to date; much effort has been expended in developing guidelines and plans; however, financial resources for implementing the plans have been very scarce; for example Yap State of the Federated States of Micronesia developed a system of integrated management that was sensitive to both the traditional management practices and modern technology; the financial resources for implementing the plan were exhausted prior to completion of its implementation;

(f) **Lack of economic tools**. ICAM is often seen as an environmental rather than a sustainable development programme; thus, it has often received limited funding from national budgets; further, many small island developing

States do not have the environmental tools (for example, indicators for integrating environmental considerations with economic development) for decision-making, which would allow Governments to estimate the true cost of environmental degradation;

(g) **Inadequate scientific and technological means for implementation**. Because of lack of island-specific studies, small island developing States often use inappropriate technologies, designed for large continental lands (for example, in waste water treatment); unfortunately, technology based on concepts and criteria appropriate for large countries is not necessarily suitable for the needs of small islands; such industries as tourism and fish processing are concentrated on coastal areas, thereby contributing to coastal pollution; these pollutant loads can be greatly reduced at their source by the application of cleaner production technologies; small island developing States, however, often do not have access to the appropriate technology.

V. Priorities for future action

A. National and regional levels

12. Priorities for future action include:

(a) **Reducing pollution from land-based activities**. Preparation and implementation of national action plans for controlling marine pollution from land-based activities consistent with the goals of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities;

(b) **Promoting integrated island management**. Promoting sustainable use of resources through establishment of integrated island management; a lead agency, authority or ministry needs to be established and be given the necessary authority to ensure that an integrated approach is adopted and that all stakeholders are fully involved through to the implementation stage;

(c) **Development of a regulatory framework**. Development and implementation of appropriate regulatory measures and institutional mechanisms for (i) reduction, prevention, control and monitoring of pollution; (ii) safe and efficient management of toxic and hazardous wastes; (iii) solid and liquid waste management; (iv) proper management of waste disposal sites; and (v) sustainable sand and coral mining; the regulatory regimes should be based on the best available knowledge, which small island developing States often lack; the States should also attempt to improve data-collection programmes; data storage and retrieval systems also need to be developed and maintained; improved national capacity is also needed and will require technical training in data collection and for the development and enforcement of regulatory regimes;

(d) **Monitoring network**. Monitoring and surveillance of fish stocks in the regions of small island developing States to ensure sustainable management of living marine resources; these States should work to strengthen their monitoring networks at both the national and regional levels;

(e) **Negotiating fisheries agreements**. Development or strengthening of regional institutions to provide technical assistance to small island developing States for negotiating agreements with foreign fishing companies in order to maximize returns from the fisheries of the regions;

(f) **Control of sand and coral mining**. Unless substitutes for sand and coral for building material are found, small island developing States will have a continuing problem of beach erosion from sand mining; thus alternative materials must be developed and their active use promoted;

(g) **Human resources development**. Building adequate manpower with the requisite level of skill for effective integrated island management; small island developing States should assess their training needs and develop a training programme, involving the private sector, non-governmental organizations and Governments; training should not be limited to technical experts; it should include local communities, for example, fishermen, tourist hotel operators, managers of industries located in coastal regions and farmers;

(h) **Extension of EEZ boundaries under article 76 of the United Nations Convention on the Law of the Sea**. Development and strengthening of capacity to collect/analyse essential data, and to negotiate extension of their EEZ; extension of EEZ boundaries will expire in four years' time; by then all interested small island developing States must have staked their claims to specific areas; high quality bathymetric/swath mapping data are essential for this purpose;

(i) **Development of EEZs.** Development of a policy and adoption of effective methods for the sustainable development of EEZs; the small land area of small island developing States has resulted in efforts to extend their activities towards the sea (for example, reclamation of land, marine-based tourism, exploitation of minerals and oil); these plans will have significant impacts on the fragile and vulnerable marine ecosystems of these States if not

implemented with the utmost precaution, based on a systematic approach.

B. International level

13. Future actions at the international level include:

(a) Assisting small island developing States to (i) establish and/or strengthen new institutional and administrative arrangements for the development and implementation of integrated island management plans; (ii) modify existing ICAM into integrated island management, including implementation of pilot projects; and (iii) ensure capacity-building for implementing integrated island management;

(b) Strengthening the capacity of small island developing States to develop and implement national and regional action plans consistent with the goals of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities;

(c) Facilitating the transfer of technologies (for example, cleaner production) to reduce pollutants at their source, and appropriate methods for treating sewage, industrial wastes and solid wastes;

(d) Supporting the development of guidelines and the implementation of pilot projects for community-based management of coastal resources, as well as the development of alternative livelihoods, for example, aquaculture and ecotourism;

(e) Enhancing the capability of small island developing States to (i) assess and monitor fish catch and the processing and marketing of fish by foreign and domestic fishing companies; (ii) develop a legal framework for sustainable fisheries activities; and (iii) develop management plans and policies for assessing, monitoring and exploiting both the living and non-living resources in the EEZ;

(f) Assisting regional institutions to strengthen their capacity to negotiate agreements related to the use of marine resources;

(g) Establishing programmes to initiate and/or strengthen the capacity of small island developing States to collect the necessary data and prepare documentation for extending their EEZ beyond the current 200 mile limit;

(h) Preparing versions of conventions related to the sustainable use of marine and coastal areas that are easily intelligible to laymen; such material should show (i) linkages between the different agreements and (ii) benefits to and responsibilities of small island developing States.

Notes

[1] *Report of the Global Conference on the Sustainable Development of Small Island Developing States, Bridgetown, Barbados, 25 April-6 May 1994* (United Nations publication, Sales No. E.94.I.18), chap. I, resolution 1, annex II.